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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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COUNTRY	Czechoslovakia	REPORT	
SUBJECT	Antonin Zapotocky Plant of the Lisen Precision Engineering Works National Enterprise, Lisen	DATE DISTR.	1 March 1956
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PLACE ACQUIRED		REFERENCES	

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THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

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1.

25X1 Antonin Zapotocky Plant of the Lisen Precision Engineering Works National Enterprise (Zavody presneho strojirenstvi Lisen, n.p., zavod Antonina Zapotockeho) in Brno-Lisen (N 49-12, E 16-42). The report includes a sketch of the layout of the plant and a sketch of the layout of Production Hall No. 5

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2. The report states that the plant turns out daily about 27 Zetor 25-type tractors, and that trials were being carried out on the caterpillar-type Zetor 35, a prototype of which was completed at the end of 1953.

3. The report also covers the production of ball bearings at the plant.

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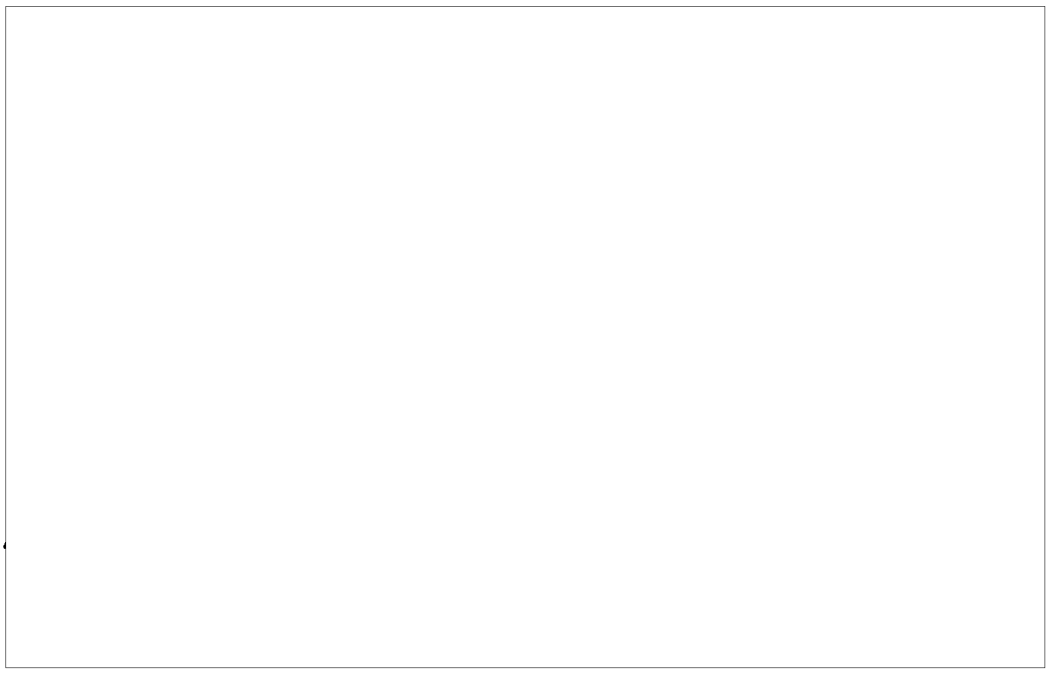

1. The plant produced aircraft engines during the last war. After the war it manufactured textile machines, but is now engaged exclusively in the manufacture of TRACTORS and BEARINGS.

2. Equipment:

The tractor shops are equipped predominantly with machines of older models which had been brought here from the original tractor plant of this industrial concern in BRNO-ZABRDOVICE. These machines are of average quality and are being gradually replaced by new equipment of Czechoslovak manufacture.

3. The equipment of the bearings manufacture is not new either. They are mostly machines brought here from different plants and are predominantly of foreign origin. The successive replacement of these machines is being carried out with machines of domestic origin. Up to 1953 the equipment coul not be used for increased production as was being called for and machine breakdowns were quite frequent. Breakdowns were aggravated by a shortage of good quality machine tools and tools in general.

3. Output of tractors:

The tractor plant(shop)of the enterprise manufactures tractors type ZETOR 25, which are four-wheel vehicles, not on caterpillars. Daily output was in the neighborhood of 27 tractors. The majority of components of these [redacted]tors are being manufactured in this plant.Only electrical equipment [redacted]eing supplied by the PAL works, and wheels and steering wheelsalso [redacted] from outside plants.

4. At the end of 1953, the prototype of a caterpillar tract[redacted]ype ZETOR 35,had been finished and trials were being carried out su[redacted]tly with this model.

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[redacted] They worked

The plant employed some 4,000 workers. mostly 3 shifts . The majority of these workers were drafted to the plant from other branches of industry and from administrative jovs, and wthis of course resulted in further defects of productions. There were about 30% women in the plant, performing generally the same tasks as men.

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14. Manager of the plant: Karel ČÁST[redacted]

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Chief of Hall # V.: Josef BLAŽEK[redacted]

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Foreman.Center # 320: Petr GRIC[redacted]

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Foreman, roller-bearing production center: fnu RAUS

Master ("mistr") center 320: Eduard GRIC[redacted]

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15. Guards:

In 1953 guard duties were performed by the Plant Guard. in 1954 these were replaced by mebers of the military INTERNAL GUARDS. NCO-s of these Internal Guards were trained in the Internal Guard NCO- School in Varnsdorf.

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5. Output of bearings:

The plant manufactures the following types of ball bearings:

6302, 6304, 6303,
6310, 6311, 6312, 6313, 6314, 6315
6213, 6214, 6216, 6217, 6218, 6219
6220, 6221, 6222, 6223, 6224.

Monthly output in production hall # V / in which Soyrce worked/ was around 150,000 bearings.

6. The above types of bearings are small sizes. Of these the most poular sizes which are being produced in the largest series are: (all b a l l bearings)

6303, output about 100,000 per month
6310, output about 20,000 per month

7. Of bearings up to 24 cm. diameters the greatest numbers produced are:

6218, monthly output 10 to 12,000
6219, monthly output 10 to 15,000

The remaining types are manufactured in numbers of 8 to 10,000 monthly.

8. Roller bearings afe usually manufactured in smaller sizes, up to 15 cm. diameter. Output figures of these are not known to Source.

9. The plant also manufactures large bearings, individually and according to orders. These are up 100 centimeter in diamter. Output figures are nd known to Source.

10. Finally, there is also a production of barrel and tapered bearings. No details available to Source.

11. Difficulties in bearings production:

These consisted principally in lack of precision of bearings and poor quality materials. Rejects amounted to 10-15%. The plant was never fulfilled more than 80 %, as a result of slack working morale, absenteeism, poor materials and tools and unreliable material shipments.

12. Materials:

Part of the materials for bearings type 6218 and 6219 came from the TATRA Works in Koprivnice, which supplied finished forgings. A large part of finished bearings of this type went back to the same TaTra Palnt.

Other forgings came from the KRALOVOPOLSKE MASHINEWORKS in Brno as well as from the plant's own forge.

13. Source has no information about the destination of shipments of finished products other than those sent to the Tatra Plqnt, asmentioned above. It was said in the plant that much of the output went to the USSR.

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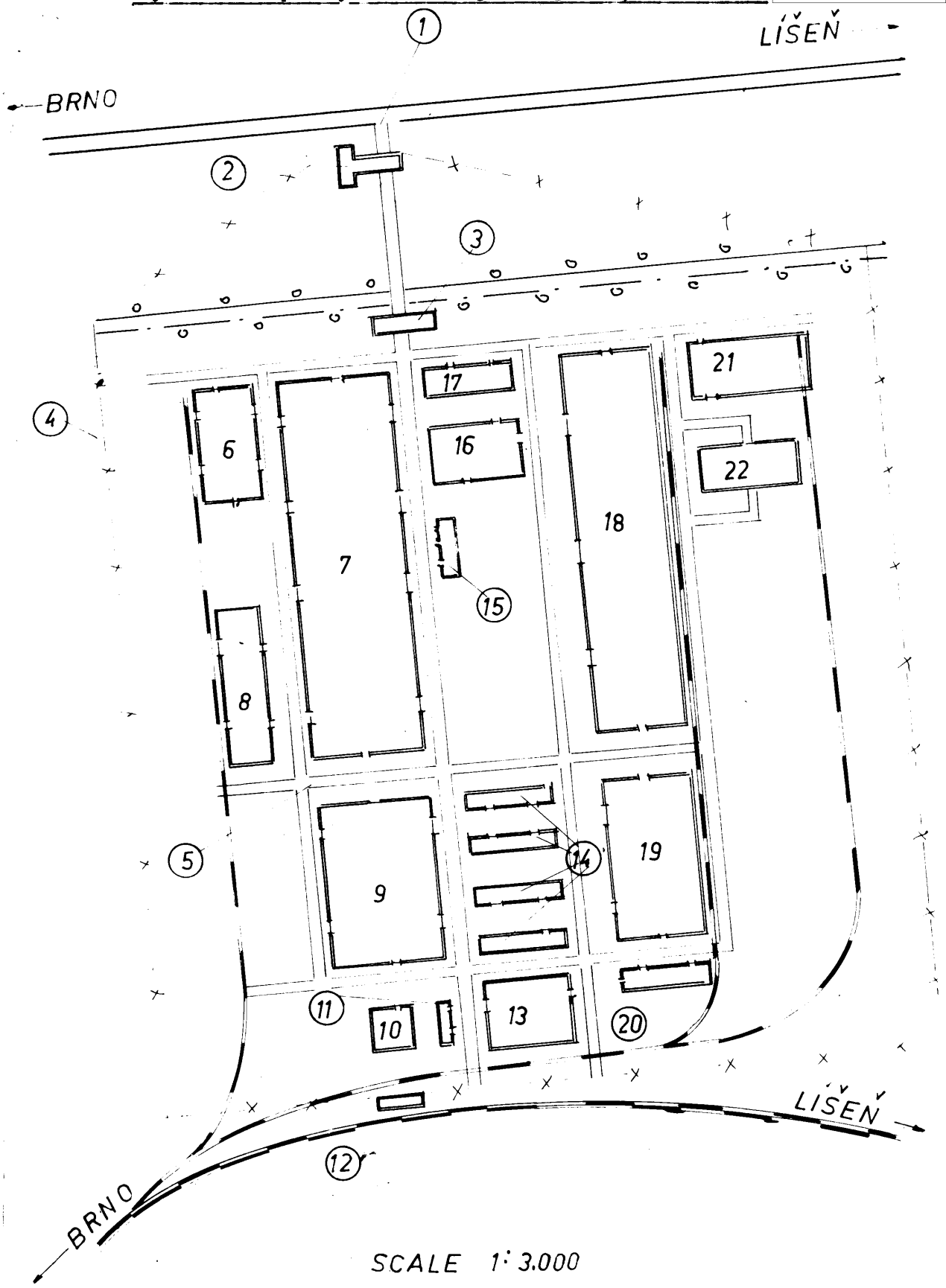
Layout of A. Zapotocky Precision Engineering Works, Brno-Lisen.



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LAYOUT:

1. Main entrance to the plant - it is from the northern side of the BRNO-LISEN highway. In 1953, a new cobble-stone highway was built, which is about 100 meters north from the original highway (not in use); the new highway ends and merges with the the original BRNO-LISEN highway beyond the plant's area.

2. New gate-keeper's ledge - about half way between the old and new highway is the new gate-keeper's ledge, which was built in 1953. Its a "T"-shaped building the eastern wing is groundfloor, 14 x 30 meters and west wing is 4-storyed, 15 x 30 meters. In the groundfloor bldg. there are: guardroom, cadre dpt. accounting section. In the west wing are offices, dormitary for apprentices and similar sections.

3. Old gate-keeper's ledge: - a groundfloor bldg., close to the old BRNO-LISEN highway. (This building was not in use in 1953.) It covers 40 x 12 meters.

4. Fence - wire-netting, reinforced by concrete pillars, which surround the entire factory.

5. Communications - the road are 4-5 meters wide, concrete surface. There is a main road leading across the plant's area.

6. Tractor shop and Sheetmetal shop - in the north-western part of the plant's area is a older building, 35 x 70 meters, and 7 meters high. In this hall fuel tanks for tractors, fenders, various pipes, front part of radiators and other pressed parts from sheetmetal are being produced.

7. Hall II. and III - the two were joined together in 1953; The building is 250 meters long, of ferro-concrete with skylights. Production of gears for transmission boxes for tractors "ZETOR 25" and some other parts goes on. In the northern part of Hall II. is the polishing shop and testing of tractors. In the gained space between the # II and III Halls is the toolshop. In the Hall III. is repairshop of engines, milling machines, Boring machines for heavier parts. In the southern part of Hall III. is a special section for ball-bearings, where ball-bearings for special purposes are individually manufactured. Along the eastern side of Hall II and Hall III is a row of offices assigned to production department.

8. Old Forge - a groundfloor building, 100 x 30 meters. In 1953, in the north-eastern point of plant's area a new forge begun to be constructed and the old forge was to be abandoned. Parts for ball and roller bearings are being produced here.

9. Hall IV. - this hall is about the same size as hall II and III. Its equipment is for production of: ball, roller and barrel bearings.

10. Boiler house, 30 x 30 meters; it is situated south of Hall III. There is coal store adjoining to its southern side.

11. First-aid-post and firefighting apparatus - a groundfloor building, 10 x 30 meters. Fire station has a garage for 1 firefighting apparatus, 2 jeeps, and a Ambulance vehicle.

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Cont...Layout

12. Gate-keeper's lodge No.2: - This entrance is for pedestrians only. Its a groundfloor building, 6 x 25 meters. There is also a foodstore "PRAMEN", tobacco shop, and a textile store as well as waiting room for visitors. The building is situated south from boilerhouse and there is a concrete RR-bridge over it.

13. Hall VI.- Opposite the First-aid-post is a ferro-concrete bldg., 60 x 50 meters. It contains Tempering shop and production of bearings. In the Tempering shop are 5 electric furnaces, 2 cooling basins filled with oil, cooled by air. Further, there are 4 furnaces for tempering of bearings and rollers. The furnaces are air-tight.
The hall produces complete ball-races and balls ready for assemblying.

14. Cloakrooms, washrooms and canteen - this section is a row of four bldgs. 60 x 10 meters.

15. Plant's Laboratory and Research section - a groundfloor, masonry building, 40 x 12 meters.

16. Plant's kitchen and canteen - it is an elevated building, 7 meters high, 40 x 60 meters.

17. Administration and management offices - a groundfloor building, 20 x 60 meters.

18. New Tractor shop - this is the largest hall, completed in 1952. It is 250 meters long, 60 meters wide. Along the inner, eastern and western sides are a row of 2-storyed offices, 6 meters wide.
There is also: tool-issuing, tool-store, engine-testing section, store of smaller parts for assemblyshop as well as washrooms, cloakrooms, guardroom and canteen.
In the northern part is a store of spare parts, left over after completion of prescribed plan. Sheetmetal and iron bars are being stored here.
In the third part is the section of "LEHKA MECHANIKA" (Lighter mechanics) for manufacture of smaller parts for tractors. The center of the hall is reserved for assembly of tractors. Store of parts needed for completion of finished products is in the eastern side.
In the southern part is the section for heavier mechanics, where cylinders axles and other heavier parts for tractors are being produced.
Tractorshop is working 3 shifts.

19. Hall V.- a ferro-concrete building, 110 x 60 meters. There are 5 production sections:

for small ball-bearings up to 10 cm diameter,
larger ball bearings up to 25 cm diameter,
- individually produced ball, roller and bafrel bearings up to 1 meter diameter,
- research section and production of bearings,
- assembly of products for 1st and 2nd section (up to 10 cm and 25 cm)

Individual production section is assemblying its own products

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The 5th section is a special production of roller bearings up to 20 cm. All sections work 3 shifts.

20. Assembly Hall and Transport section - a ferro-concrete building, 60 x 15 ms. containing the main checking and assembly of bearings, produced by Hall IV. and partly by Hall V. There is packing and transport section in this hall.

21. New Forge: - a ferro-concrete, 80 x 40 x 12 meters building. In 1953, the new forge was equipped with 7 furnaces and pneumatic press.
Along the eastern side is a loading ramp for RR spur, which leads into the Forge. Along the western side is 2-steryed row of offices.
Along the southern side is another (groundfloor only) row of offices.
Forge has 2 cranes.

22. Apprentice workshop and Training section - the western part is 2-steryed, southern part is groundfloor, 70 x 30 meters.

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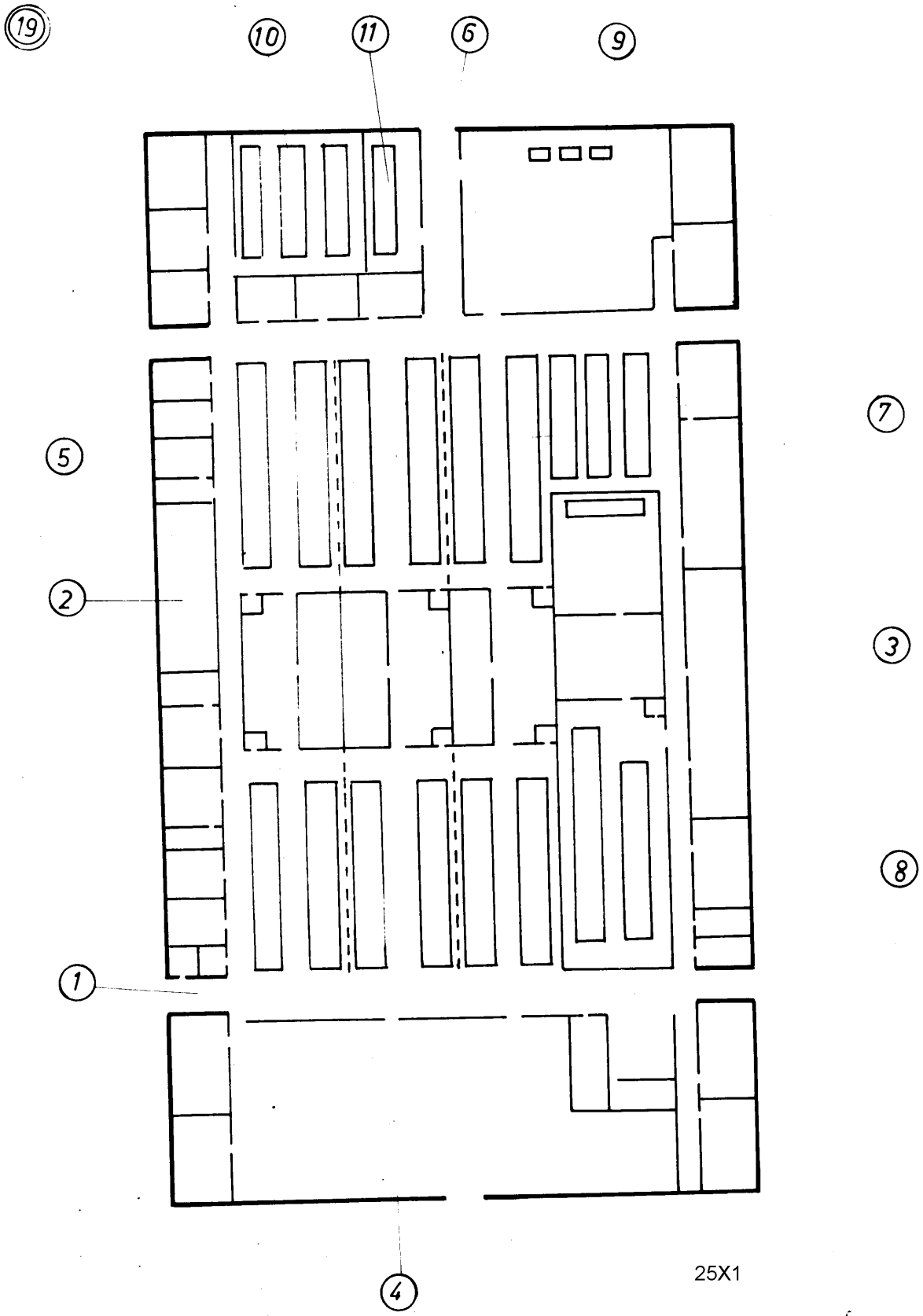
Production Hall # 5
A Zapotocky Precision Engineering Works--Brno-Lisen.



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16. Production Hall # V :
(See atta hed diagram)

(1) Principal entrance. The aother 3 entrances are not used. Gatekeeper's office and caffetaria.

(2) Row of offices along the west wall. In the center of the raw is a dining hall and lavatories.

(3) Row of offices along the east wall. Also tools, tool maintenance,etc.

(4) Assembly center and final control of bearings.(ball-bearings). Also electromechanics' shop and 12 polishing mashines.

(5) Roller-bearing manufacturing center. With 2 rows of grinding mashines, 10 in all, for grinding parts of bearings. In the center is a semifinished products store and control of these products both in soft and hard finish. 10 revolving lathes of Czs. manufacture and some semiautomatic German Magdeburg lathes.

(6) Manufacturing Center # 310 for the manufacture of small ball-bearings of up to 10 centimeter diameters. Abput 12 grinding mashines in 2 rows, mostly of foreign manufatcure. In the center are stores of materials being mashined and their controls. In the northern part ar 5 VYKMAN automatic lathes, 1 numbering mashine and 3 smaller semiautomatic lathes. In the second row are 5 revolver lathes of Czs. manufacture. This center manufactures 100,000 ball bearings type 6303 and about 20,000 types 6302 and 6300 per month.

(7) Manufacturing Center # 320 for large ball-bearings of diamters of 10 to 15 centimeters. Output around 19,000 bearings of different types per month.(See Paragraph 5 to 10 above.)

In the south part of the center are 12 grinding mashines of domestic and foreign types. The center is the same as the previous Center. North and west of the center part is a row of five semiautomatic WEIPERT lathes, one numberng mashine and five automatic finishing mashines.

In the eastern row there is 1 TOS lathe, 2 Soviet FAJA lathes for larger pieces, i fully automatic lathe LIBERTA for smaller parts of bearings, i fully automatic lathe Magdeburg and 4 semiautomatic BERINGER lathes.

In the north part there are three further rows af mashines. The third row contains two VYKMAN automats and i horizontal grinder. In the fourth row are three Czs. revolver lathes, a universal grinder and two revolver lathes.

(8) Individual manufacture of bearings: produces individual pieces according to orders and up to 100 cm diamters, and not less than 30 cm. These include ball. roller, barrel and tpared bearings of all types. The forst row of mashines contains horizontal and vertical grinding mashines suitable for diameters of up to 100 centimeters. Most of the rings and ball races come here from other shops already tempered and mashined and this shop merely grinds and assembles the bearings. In the center of the shop are control and assembly and there are five lathes for manufacturing smaller types of bearings in the spft stage.

(9) Stores of material and cutting of materials: contains three elctric cutters.

(10) Development Shop: it contains all the necessary mashines for developing bearings (protoypes?). Separated from the rest by a wire-mesh fence.

(11) Auxiliary shop: manufactures the most urgently required spares for repairing mashines. Also stores for all parts of this hall.

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